

What is claimed is:

1. A method for determining position of an optic pick-up head (CPLH) relative to a disk with a plurality of sections, each section corresponding to an upper limit and a lower limit, comprising the steps of:

5 (1) reading sync signals on the disk;

 (2) generating an averaged sync signals in certain rotations of the disk;

 (3) comparing the averaged sync signal with the upper limit and the lower limit to determine a current section where the pick-up head is located.

- 10 2. The method as claimed in claim 1, wherein the step of (2) generating the averaged sync signals includes: (a) determining a rotation frequency of the disk based on the moving speed of the PUH and the distance between the PUH and a center of disk; and (b) calculating sync signals in certain rotation of the disk.

- 15 3. The method as claimed in claim 1, further comprising a step (4) of generating a PUH ready signal indicating the PUH in a steady state, based on a frequency variation signal, a track on success signal and the rotation frequency of the disk.

- 20 4. The method as claimed in claim 3, wherein the PUH ready signal is enabled when the frequency variation state is de-asserted and the track on success signal is asserted.

5. A device for determining the position of an optic pick-up head relative to a disk with a plurality of sections, each section corresponding to an upper limit and a lower limit, comprising:

25 a position detector for receiving a frequency variation (FA), a track on success signal (TOS), and a frequency of disk rotation (FODR) signal and outputting a pick-up head ready signal (PUHRDY); and

 a position condition detecting unit for receiving a frame synchronous signal (FRAMESYNC) and a disk rotating frequency signal (FODR),
30 and outputting an optic pick-up head position signal; wherein the effectiveness of the optic pick-up head position refers to a condition of the pick-up head ready signal.

6. The device as claimed in claim 5, wherein the position condition detecting unit further comprises:

a counting unit, receiving the FRAMESYNC signal and the FODR signal and outputting a FRAMESYNC per FODR;

- 5 a position counting unit, receiving the feedback position signal, and outputting an upper limit and a lower limit of current section;

a comparing unit, receiving the FRAMESYNC per FODR, the upper limit and lower limit of the current section and outputting the optic pick-up head position signal.

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